

Amendments to the Claims:

This listing of claims replaces all prior versions, and listings, of the claims in the applications.

Listing of Claims

Claims 1 - 24 (Withdrawn)

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Claim 25 (Currently Amended): An integrated optical waveguide comprising:
a substrate;

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a light transmissive element comprising a waveguide and a lens as a unitary body;
an upper cladding ~~patterened~~ patterned to have at least one region in which the light transmissive
element is air clad ; and
wherein said lens has a face perpendicular to the substrate and focuses light in a plane parallel to
the substrate and a lens face width at least 50% larger than the waveguide.

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Claim 26 (Cancelled): An integrated optical waveguide according to claim 25 wherein the light
transmissive element is air clad on at least one end.

Claim 27 (Cancelled)

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Claim 28 (Cancelled): An integrated optical waveguide according to claim
~~[[27]]~~ 25, wherein the lens has an air clad curved surface.

Claims 29 - 32 (Withdrawn)

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Claim 33 (Cancelled): An integrated optical waveguide according to claim 25 wherein a portion
of the upper cladding matches a portion of the light transmissive element.

Claim 34 (Cancelled): An integrated optical waveguide according to claim 25 wherein a top
portion of the light transmissive element is air clad.

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Claim 35 (Currently Amended): An integrated optical waveguide according to claim 25, wherein
the upper cladding is chosen from a group ~~comprises~~ comprising a polymeric material an
organosilicon condensate polymer.

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Claim 36 (Cancelled): An integrated optical waveguide according to claim 35, wherein the
polymeric material comprises a thermally curable polymer.

Claim 37 (Cancelled): An integrated optical waveguide according to claim 36, wherein the
thermally curable polymer is a siloxane polymer.

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Claim 38 (Cancelled): An integrated optical waveguide according to claim 35, wherein the
polymeric material comprises a polymer curable by actinic radiation.

Claim 39 (Cancelled): An integrated optical waveguide according to claim 38, wherein the actinic radiation is ultraviolet light.

5 Claim 40 (Cancelled): An integrated optical waveguide according to claim 39, wherein the polymeric material is a siloxane polymer.

10 Claim 41 (Cancelled): An integrated optical waveguide according to claim 25, wherein the upper cladding is patterned by selective curing with a patterned heat source and uncured material dissolved with a solvent, whereby cured material is insoluble in the solvent.

15 Claim 42 (Cancelled): An integrated optical waveguide according to claim 25, wherein the upper cladding is patterned by selectively curing with a patterned source of ultraviolet light and uncured material dissolved with a solvent, whereby cured material is insoluble in the solvent.

Claim 43 (Previously Amended): An integrated optical waveguide according to claim 25, wherein the substrate comprises silicon, quartz, fused silica, glass, or a polymeric material.

20 Claim 44 (Previously Amended): An integrated optical waveguide according to claim 43, wherein the polymeric material comprises an acrylate, Perspex, polymethylmethacrylate, polycarbonate, polyester, polyethyleneterephthalate or PET.

25 Claim 45 (Currently Amended): An integrated optical waveguide according to claim 25 wherein the light transmissive element comprises materials selected from polymeric materials, glass and semiconductors.

Claim 46 (Cancelled): An integrated optical waveguide according to claim 45, wherein the polymeric materials comprise polymers curable by actinic radiation.

30 Claim 47 (Cancelled): An integrated optical waveguide according to claim 46, wherein the actinic radiation is ultraviolet light.

35 Claim 48 (Cancelled): An integrated optical waveguide according to claim 47, wherein the polymeric material is a siloxane polymer.

Claims 49 - 65 (Withdrawn):

40 Claim 66 (Previously New): An integrated optical waveguide according to claim 25 including a lower cladding layer between the substrate and the light transmissive element.

Claim 67 (Previously New): An integrated optical waveguide according to claim 66 wherein the lower cladding layer comprises materials selected from polymeric materials, glass and semiconductors.

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